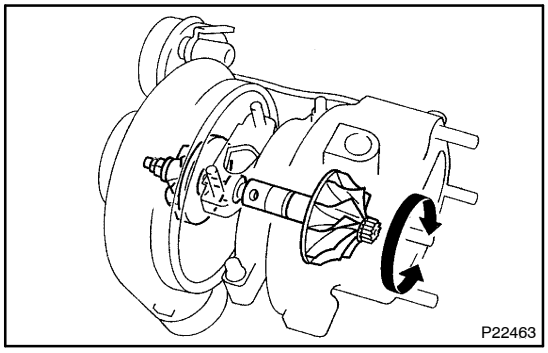
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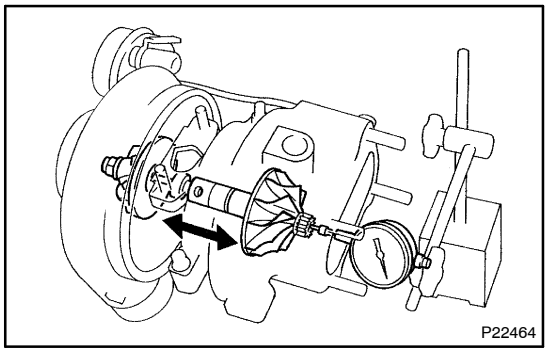
INSPECTION



1. INSPECT IMPELLER WHEEL ROTATION

Grasp the edge of the turbine wheel and turn it. Check that the impeller wheel turns smoothly.

If the impeller wheel does not turn or if it turns with a heavy drag, replace the turbocharger assembly.

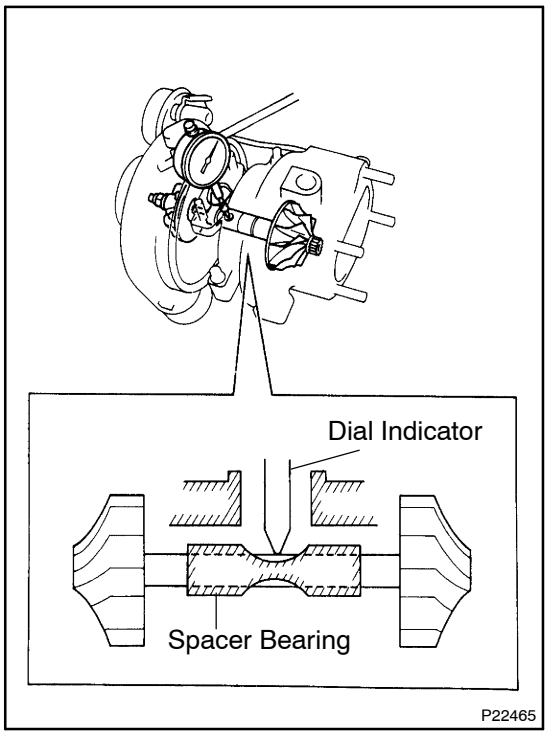


2. INSPECT AXIAL PLAY OF TURBINE SHAFT

Insert a dial indicator into the exhaust side hold the turbine wheel edge by hand, and check the axial play.

Maximum oil clearance: 0.11 mm (0.0043 in.) or less

If the axial play is not as specified, replace the turbocharger assembly.



3. INSPECT RADIAL PLAY OF TURBINE SHAFT

(a) From oil outlet hole, insert a dial indicator through the hole in the spacer bearing and set it in the center of the turbine shaft.

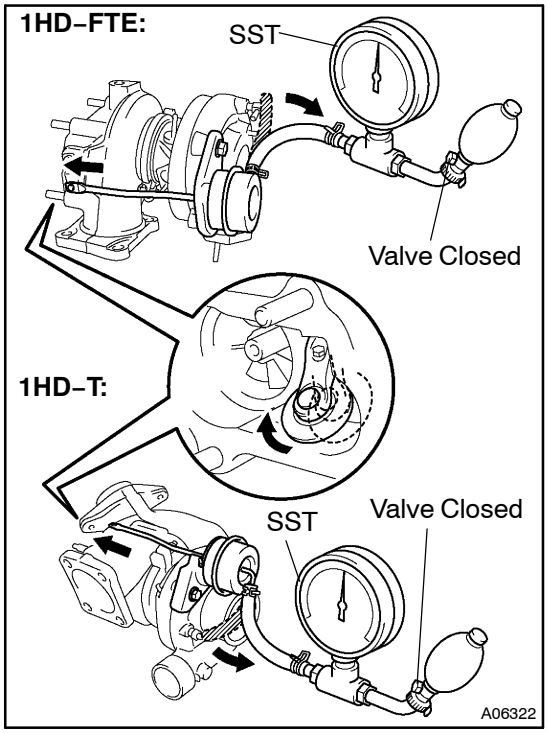
(b) Move the impeller shaft in a radial direction, measure the radial play of the turbine shaft.

Maximum oil clearance:

1HD–T: 0.16 mm (0.0063 in.) or less

1HD–FTE: 0.14 mm (0.0055 in.) or less

If the radial play is not as specified, replace the turbocharger assembly.



4. INSPECT ACTUATOR OPERATION

(a) Disconnect the actuator hose.

(b) Using SST (turbocharger pressure gauge), 1HD–T: 92.7 kpa (0.94 kgf/cm^2, 13.4 psi) 1HD–FTE: 114.0 kpa (1.16 kgf/cm^2, 16.5 psi) of pressure to the actuator and check that the rod moves.

If the rod does not move, replace the turbocharger assembly.

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NOTICE:

Never apply more than 1HD–T: 111.0 kPa (1.13 kgf/cm^2, 16.1 psi) 1HD–FTE: 148.5 kPa (1.51 kgf/cm^2, 21.5 psi) of pressure to the actuator.